### REQUEST FOR PROPOSAL

The Michigan Department of Transportation (MDOT) is seeking professional services for the project contained in the attached scope of services.

If your firm is interested in providing services, please indicate your interest by submitting a Proposal, Proposal/Bid Sheet or Bid Sheet as indicated below. The documents must be submitted in accordance with the latest "Consultant/Vendor Selection Guidelines for Service Contracts" and "Guideline for Completing a Low Bid Sheet(s)", if a low bid is involved as part of the selection process. Referenced Guidelines are available on MDOT's website under Doing Business > Vendor/Consultant Services > Vendor/Consultant Selections.

RFP SPECIFIC INFORMATION	)N	
BUREAU OF HIGHWAYS	✓ BUREAU OF TRANS	SPORTATION PLANNING **  TOTHER
THE SERVICE WAS POSTED ON T	HE ANTICIPATED QUARTERLY REQI	JESTS FOR PROPOSALS
✓ NO YES	DATED	THROUGH
Prequalifed Services – S Scope of Services for requirements.	See page of the attached uired Prequalification Classifica-	Non-Prequalifed Services - If selected, the vendor must make sure that current financial information, including labor rates, overhead computations, and financial statements, if overhead is not audited, is on file with MDOT's Office of Commission Audits. This information must be on file for the prime vendor and all sub vendors so that the contract will not be delayed.
Qualifications Based S	Selection – Use Consultant/Vendo	or Selection Guidelines
most qualified to perform the serv	vices based on the proposals. The	eview the information submitted and will select the firm considered selected vendor will be contacted to confirm capacity. Upon confiriations will be conducted with the firm selected.
but separate from, the proposal. (see address list, page 2). The The vendor's name and return ac est scoring proposal. Unopened	Submit directly to the Contract Ad priced proposal must be submitted dress MUST be on the front of the	g only, a priced proposal must be submitted at the same time as, Iministrator/Selection Specialist, Bureau of Transportation Planning d in a sealed envelope, clearly marked "PRICE PROPOSAL." e envelope. The priced proposal will only be opened for the highto the unselected vendor(s). Failure to comply with this procedure e mail room.
tract. This type of system has a	ob-order cost accounting system t	e a cost accounting system to support a cost plus fixed fee confor the recording and accumulation of costs incurred under its coneses segregated and accumulated in the vendor's job-order accounting
Qualifications Review information.	/ Low Bid - Use Consultant/Vendo	or Selection Guidelines. See Bid Sheet Instructions for additional
on the MDOT website. The notif	cation will be posted at least two b	review the proposals submitted and post the date of the bid opening business days prior to the bid opening. Only bids from vendors that lowest bid will be selected. The selected vendor may be contacted
		s. See Bid Sheet Instructions below for additional information. The t the determining factor of the selection.
Low Bid (no qualificationstructions.	ions review required - no propo	osal required.) See Bid Sheet Instructions below for additional

### **BID SHEET INSTRUCTIONS**

A bid sheet(s) must be submitted in accordance with the "Guideline for Completing a Low Bid Sheet(s)" (available on MDOT's website). The Bid Sheet(s) is located at the end of the Scope of Services. Submit bid sheet(s) separate from the proposal, to the address indicated below. The bid sheet(s) must be submitted in a sealed manila envelope, clearly marked "SEALED BID." The vendor's name and return address MUST be on the front of the envelope. Failure to comply with this procedure may result in your bid being opened erroneously by the mail room and the bid being rejected from consideration.

MDOT 5100H (10/07) Page 2 of 2

PROPOSAL SUBMITTAL INFORMATION			
REQUIRED NUMBER OF COPIES FOR PROJECT MANAGER Six	PRO 3/27/	POSAL/BID DUE DATE 09	TIME DUE 12:00 noon
PROPOSAL AND BID SHEET MAILING ADDRESSES			
Mail the multiple proposal bundle to the MDOT Project Manager or Oth  MDOT Project Manager	ner indicated	below.  MDOT Other	
Robert L. Kuehne, Bureau of Transportation Planning Michigan Department of Transportation P.O. Box 30050 (425 W Ottawa, 48913) Lansing, MI 48909	9		
Mail one additional stapled copy of the proposal to the Lansing Office	indicated bel	OW.	
Lansing Regular Mail	OR	Lansing Overni	ight Mail
Secretary, Contract Services Div - B470 Michigan Department of Transportation PO Box 30050 Lansing, MI 48909		Secretary, Contract Services I Michigan Department of Trans 425 W. Ottawa Lansing, MI 48933	
Contract Administrator/Selection Specialist Bureau of Transportation Planning B470 Michigan Department of Transportation PO Box 30050 Lansing, MI 48909		Contract Administrator/Selecti Bureau of Transportation Plan Michigan Department of Trans 425 W. Ottawa Lansing, MI 48933	ning B470

#### **GENERAL INFORMATION**

Any questions relative to the scope of services must be submitted by e-mail to the MDOT Project Manager. Questions must be received by the Project Manager at least four (4) working days prior to the due date and time specified above. All questions and answers will be placed on the MDOT website as soon as possible after receipt of the questions, and at least three (3) days prior to the RFP due date deadline. The names of vendors submitting questions will not be disclosed.

MDOT is an equal opportunity employer and MDOT DBE firms are encouraged to apply. The participating DBE firm, as currently certified by MDOT's Office of Equal Opportunity, shall be listed in the Proposal

### MDOT FORMS REQUIRED AS PART OF PROPOSAL SUBMISSION

5100D - Request for Proposal Cover Sheet

5100G - Certification of Availability of Key Personnel

5100I - Conflict of Interest Statement

(These forms are not included in the proposal maximum page count.)

### **Michigan Department of Transportation (MDOT)**

# ANN ARBOR – DETROIT REGIONAL RAIL PROJECT

### **REQUEST FOR PROPOSAL**

#### **BEST VALUE SELECTION**

### Special notes pertaining to submission of Cost Proposal Sheet and Proposal Length

- For this Request for Proposals (RFP) only, do not submit the cost proposal sheets in a separate, sealed envelope as directed for Bid Sheets on form 5100H.
- Bid sheets should be submitted to the MDOT Project Manager along with RFP proposal. The format of the bid sheet is indicated at the conclusion of this RFP. Questions about this process should be directed to Kathy Popoff at <a href="mailto:popoffk@michigan.gov">popoffk@michigan.gov</a>.

#### I. OBJECTIVE

The Michigan Department of Transportation (MDOT), in cooperation with the Southeast Michigan Council of Governments (SEMCOG), is issuing a request for proposal for a 19-month effort to provide project direction, assistance, and consultation regarding the implementation of a regional passenger rail service between Ann Arbor and Detroit by October 2010 and other passenger rail endeavors such as the Washtenaw County- Livingston County Commuter Rail Project (WALLY). The focus is assisting in the implementation of new passenger rail service in the 38-mile corridor between Ann Arbor and Detroit with four intermediate stops (including one stop connecting with Detroit Metro Airport) designed to accommodate commute, reverse commute, shopping, medical, personal business, student, and recreational travel.

The purpose of the Ann Arbor-Detroit Regional Rail Project is to demonstrate that there is sufficient demand for passenger rail service in the Ann Arbor-Detroit Corridor to qualify for federal funding. While the Ann Arbor-Detroit-Pontiac route is already served by Amtrak with three daily round trips, this service is not sufficient to accommodate commuter, business, entertainment, and various other tripmaking in the corridor. The WALLY Project involves instituting commuter rail service from Howell to Ann Arbor, a 27-mile corridor, including three intermediate stops (Chilson, Hamburg and Whitmore Lake), with the Ann Arbor station being immediately north of Ann Arbor at Barton Road.

#### II. BACKGROUND INFORMATION

In a world roiled by rising energy prices, uncertain oil supplies and the threat of man-made climate change due to the rising consumption of fossil fuels, communities that offer mass transit options are better positioned for growth and economic prosperity. Southeast Michigan has considered expanded passenger rail transportation in a number of corridors over the last several decades, but has yet to implement a major project since the Detroit Downtown People Mover opened in 1987.

Over the ensuing period, a number of studies have been undertaken for transit projects in the major corridors. The I-94 corridor between downtown Detroit, Detroit Metro Airport and Ann Arbor has been particularly well studied over the past decade under the following projects:

- Lansing-Detroit Passenger Rail Study (CATA)
- Ann Arbor-Detroit Passenger Rail Study (AATA)
- Ann Arbor-Downtown Detroit AA/DEIS (SEMCOG)
- Midwest Regional Rail Initiative Phases 1-6 (MDOT)
- Detroit-Chicago High Speed Rail Corridor Study Update-South of the Lake Corridor (Amtrak/MDOT/INDOT)
- Preliminary Feasibility Study for the West Detroit Track Connection (Amtrak/MDOT)
- Detroit Intermodal Freight Terminal (DIFT) Project
- Dearborn Intermodal Passenger Rail Facility Environmental Assessment (City of Dearborn)

MDOT and SEMCOG have long been proponents of developing and improving passenger rail service in the I-94 corridor. MDOT has funded the Michigan Central Line civil/track improvements and the development of the Incremental Train Control System (ITCS) system to attain 110 mph operations on the western segment of the Amtrak corridor. SEMCOG developed a comprehensive plan for regional transportation, "Improving Transit in Southeast Michigan: A Framework for Action" dated October 2001, which was unanimously adopted by SEMCOG's General Assembly. This report recommended an Alternatives Analysis from Lansing to Detroit and an exploration of the feasibility of commuter rail service between Ann Arbor and Detroit on the NS, CSAO and CN properties. Following the Lansing-Detroit study by CATA and Ann Arbor-Detroit study by AATA, SEMCOG managed the most recent Ann Arbor-Detroit study, combining two study teams addressing Downtown Detroit-Metro Airport and Ann Arbor-Detroit.

Michigan DOT is undertaking the improvement of an historic bottleneck with the West Detroit Connection between the CSAO Michigan Central tracks and the CN Shoreline Sub. Currently, Amtrak trains running between Dearborn and Detroit traverse an indirect route through Conrail controlled interlockings at West Detroit, Scotten, Springworks and Vinewood before joining the CN Shoreline Subdivision track to the Detroit New Center Station. While the distance is a relatively short eight miles, the published schedule allows between 21 and 33 minutes (inclusive of station dwell at one station) for the operation, due to freight conflicts and slow track speeds. This improvement alone will save significantly on the scheduled travel time, enhance passenger service reliability, and increase the efficiency of freight service in the region.

The various commuter rail passenger studies performed over the last decade defined reasonable infrastructure improvements, capital and operating costs, and travel times sufficient to attract acceptable passenger volumes and revenues in most markets. However, the relative absence of effective transit services in the I-94 corridor resulted in low ridership volumes when modeled according to the strict Federal Transit Administration (FTA) New Starts procedures. The most recent study, the Ann Arbor-Downtown Detroit Alternatives Analysis/Draft Environmental Impact Statement, submitted in July 2007, concluded that the Commuter Rail Option, CRT 1, generates a modest increase in daily transit ridership of 2,131 trips. This is insufficient to meet the FTA cost effectiveness hurdle, a necessary precondition to achieving federal funding support in the New Starts Program.

Over the past year, MDOT, Amtrak, SEMCOG, and local transit providers (DDOT, SMART, AATA) have collaborated to implement a demonstration project to prove the adequacy of ridership and revenues. The demonstration project seeks to run eight additional passenger trains per day between Ann Arbor and Detroit with modest capital improvements including the structural, track and signal work at the Detroit Woodward Avenue station and West Detroit Interlocking, addressed under MDOT's West Detroit Connection Track Project. Additional improvements suggested by recent NS capacity studies and operating plans developed in coordination with Amtrak may include additional sidings and crossovers, a new station at Ypsilanti, a new station at Henry Ruff Road serving Detroit Metro Airport, parking expansion, and maintenance facilities. In addition, locomotives and passenger coaches must be sourced to enable service to start in October 2010.

On November 18, 2008, MDOT commissioned a consultant to assist in moving this project toward implementation. Among the tasks assigned to the consultant were the following:

- Assess the current status of the system and service
- Develop a work program
- Develop a work schedule

The following three reports were prepared to satisfy these tasks: (1) Statement of Current Situation, (2) Work Program, (3) Work Schedule.

Based on the magnitude of the tasks and the short time duration available to meet the start-up service date, MDOT and SEMCOG have determined that it is necessary to seek the services of a General Engineering Consultant (GEC) to provide support in implementing the Ann Arbor-Detroit Regional Rail Project and other passenger rail projects in Southeast Michigan.

### III. SCOPE OF SERVICES

# A. Ann Arbor-Detroit Regional Rail Project

### 1. Need for GEC

The GEC shall serve as a program management consultant and provide staff to complement MDOT and SEMCOG staff resources to produce the plans described herein and execute the activities identified in the Work Schedules for Pre-Construction and Construction Activities (exhibits 1 and 2) for the Ann Arbor-Detroit Regional Rail Project. Proposers should present a proposal to perform the work solely with GEC staff. During negotiations with the successful proposer, MDOT, SEMCOG, and the GEC will determine the work allocation among the project management team consisting of personnel from the GEC, MDOT, and SEMCOG.

### 2. Deliverables

The GEC shall prepare and submit the following deliverables:

- a. Project Management Plan
- b. Project Quality Management Plan
- c. Risk Management Plan
- d. Contract Management Plan
- e. Operator Quality Management Plan

- f. Financial Plan
- g. Safety and Security Management Plan
- h. Testing and Commissioning Plan
- i. Maintenance Plan
- j. Performance Standards
- k. Safety and Security Certification Plan
- 1. Operating Plan

Additional deliverables shall be defined with the allocation of work.

Unless noted otherwise, the GEC deliverables for each item described below shall consist of each of the following submittals: a 5%-level (conceptual), a 30%-level (preliminary), a 60%-level (in-progress), a 90%-level (pre-final), and a 100%-level (final).

# 3. Project Management Plan

A Project Management Plan (PMP) is an essential tool to implementing a new passenger service under an aggressive schedule, budget and performance constraints. In addition, SEMCOG and MDOT desire to maintain the option to seek funding through the Federal Transit Administration to build a robust commuter rail service in the Ann Arbor-Detroit Rail Corridor. The initial phase of the project will be a demonstration project consisting of four (4) daily round-trips. The PMP for this project needs to adhere to the FTA Grant Management Guidelines, FTA Circular 5010.1C, to enable MDOT and/or SEMCOG to secure FTA funding for the demonstration service and subsequent build-out of the system.

The GEC shall develop a PMP that includes as a minimum the following elements of work as presented in the FTA Project and Construction Management Guidelines:

- a. Adequate staff organization of the project management team, complete with well-defined reporting relationships, statement of functional relationship, job descriptions, and job qualifications
- b. A budget covering the project management organization, property acquisition, utility relocation, systems demonstration staff, and audits
- c. A design management process encompassing PE and final design
- d. A construction schedule
- e. A document control procedure and record-keeping system
- f. A change order procedure which includes a documented, systematic approach to the handling of construction change orders
- g. A description or organizational structures, managerial technical skills, and staffing levels required throughout the construction phase

- h. Quality control (QC) and quality assurance (QA) programs which define functions, procedures, and responsibilities for project planning, pre-engineering/final design, construction/procurement and integration of system components
- i. Material testing policies and procedures
- j. Internal plan implementation and reporting requirements
- 1. Criteria and procedures to be used for testing the operational system or its major components
- m. Periodic updates of the plan, especially related to project budget and project schedule, financing, ridership estimates, and the status of local efforts to enhance ridership where ridership estimates partly depend on the success of those efforts

The GEC shall ensure that the PMP demonstrates that all phases of the project have been thoroughly considered, giving thought to the methods to be used to execute the project, and the interfaces that will be created between the various participants. The GEC shall ensure that the PMP defines the objectives of the project, the methods and resources proposed to be used in meeting those objectives, the overall management strategy including project control, and the responsibilities, authorities, and measures of performance for all parties involved. In developing the PMP, the GEC shall adhere to the Project Management Plan Outline as presented in Table 2.1 of the FTA's Project and Construction Management Guidelines.

# 4. Project Quality Management Plan

The GEC shall prepare a Project Quality Management Plan in accordance with FTA-IT -90-5001-02.1, Quality Assurance and Quality Control Guidelines for (1) project planning, (2) preengineering/final design, (3) construction/procurement, (4) testing/start-up.

### 5. Risk Management Plan

The GEC shall prepare a Risk Management Plan that describes how the project is organized and the procedures used to manage the project risks, addressing in the plan the following:

- a. Roles and responsibilities of the project management team in risk management
- b. Identification of project risks
- c. Categorization of risks in terms of probability of occurrence and impact on project cost, schedule, scope, and /or quality
- d. Risk handling should the risk event occur through one or more of the following:
  - Assumption (accepting the consequences of risk)
  - Avoidance (changing the project deliverable design or work methods that lead to risk)
  - Control (developing measures to reduce the risk's probability of occurrence)

• Transfer (sharing or transferring the consequences of the risk with others)

# 6. Contract Management Plan

The GEC shall develop a Contract Management Plan that defines the goods and services that are to be acquired for the project and how they will be purchased or contracted and how the purchase orders and contracts will be administered. For procurement of goods and services, the Contract Management Plan shall address the following:

- a. Types of contracts to be used
- b. Responsible party for estimating the contract price
- c. Scope of work statement for the contract
- d. Use of standardized procurement documents and special documents needed
- e. Integration of procurement lead times into the project schedule
- f. Incorporation of contractual delivery dates into the contracts to meet the project's risk management objectives, including liability and insurance condition and minimum limits to be met by the contractor
- g. Establishment of evaluation criteria to assess the selection of contractors
- h. Definition of the procurement procedures for: preparation of procurement documents, advertising, bidder conferences, any bidder prequalification, receipt of proposals/bids, bidder interviews, selection, contract price negotiation, contract award and handling of protests

### 7. Operator Quality Management Plan

The GEC shall prepare a draft Operator Quality Management Plan that will be included with the solicitation for the contract operator. The draft plan shall describe the responsibilities of the contract operator regarding the following items:

- Project Execution Plan
- Project Procedures Manual
- Project Quality Management Plan

#### 8. Financial Plan

In order to comply with FTA New Starts requirements, a Financial Plan is needed consistent with a full build-out of the system beyond the demonstration project. The GEC shall assist MDOT in the preparation of this Financial Plan. The Financial Plan shall be prepared for two scenarios as follows:

- FTA New Starts program as the major funding source for build-out of the system
- Alternative funding for the build-out of the system

The GEC shall also prepare an interim financial plan based on the demonstration level of service using a three-year and five-year cash flow projection.

The central element of the Financial Plan shall be a 20-year cash flow projection that includes the capital and operating plans for the Ann Arbor-Detroit Regional Rail service.

- Service Capital Plan
  - Existing and forecast capital spending and funding sources
  - o Proposed project cost estimates
  - Proposed project funding sources
- Service Operating Plan
  - o Existing system O&M costs and operating funding
  - Proposed project O&M costs
  - o Proposed project fare revenues and funding sources

The 20-year cash projection shall be the summary of several elements of the plan including funding sources and revenue forecasts, proposed project capital budget, other planned capital projects within the next 20 years, and annual operating and maintenance (O&M) expenses.

# 9. Safety and Security Management Plan

The GEC shall prepare a Safety and Security Management Plan (SSMP) in accordance with Chapter IV of FTA Circular 5800.1, Safety and Security Management Guidance for Major Capital Projects. The SSMP shall include the following:

- Project Management commitment and philosophy towards safety and security
- Integration of safety and security into the project development process
- Assignment of organizational safety and security responsibilities for the project
- Safety and Security Analysis and hazard and vulnerability management processes
- Development of safety and security design criteria
- Process for ensuring qualified operations and maintenance personnel
- Safety and security verification processes (including final safety and security certification) to verify conformance with specified safety and security requirements during design, in equipment and materials procurements, and during testing/inspection and start-up phases
- Construction safety and security management activities

# 10. Testing and Commissioning Plan

The last stage of each rail service construction project is the process of verifying that the construction has occurred in accordance with the technical requirements and that the

performance and safety of the facility, system, or other element has reached the point that it is ready to enter revenue service. The GEC shall prepare a Testing and Commissioning Plan, sufficient to be included with the other documents that will comprise the solicitation request for a contract operator as described below:

- Testing and Commissioning Safety Plan. Verification that a constructed item meets its performance requirements is accomplished by testing. The test process, however, has the potential for failure or insufficient performance, and therefore creates risk to the people, equipment, and the facilities and systems participating in the test. A Safety Plan is required to ensure that such risk is minimized, communications are clear and sufficient, and test procedures and processes are understood. The GEC shall prepare a draft Safety Plan for the testing and commissioning phase of the Project. The Plan shall include detailed examples for several elements, which may be based upon actual plans from other passenger rail start-up projects. The Safety Plan shall include a draft organization chart with reporting relationships and authority levels clearly indicated. It shall include all facilities and systems that will be tested prior to the start of revenue service; list all public authorities and emergency responders, with phone numbers (and contact names, if available) for each site and area; and, clearly define each test, including the reason for the test, that is likely to be required.
- System Integration Test Schedule. Starting with the Construction Schedule that is addressed elsewhere, the GEC shall expand the schedule details for each facility and system to include each element of an integrated test program, including duration. The GEC shall present this information as an overall CPM schedule for the entire project for all system integration testing.
- Pre-Revenue Service Testing and Commissioning Schedule. The GEC shall prepare a CPM schedule that includes each step necessary for pre-revenue service testing and commissioning for each element of the Project.

#### 11. Maintenance Plan

The Ann Arbor-Detroit Regional Rail service will be operated and maintained (excluding the track, structures, signals, and other infrastructure of the Class I railroads and Amtrak) by a contract operator. To protect the public's investment, a thorough and cost-effective Maintenance Plan for the contract operator to implement (and to be measured and audited against) is essential. The GEC shall develop a Maintenance Plan to a sufficient level of detail to permit it to be part of the solicitation for the contract operator and to allow the proposers to submit detailed, fixed-cost, multiple-year pricing to provide the maintenance efforts necessary to keep each asset in a state of good repair. A specific level of availability and reliability shall be established for each element (see Performance Standards).

The Maintenance Plan shall address each of the following capital investments (excluding those owned by other entities): rolling stock; maintenance facilities; crew reporting and rest facilities; fueling facilities; stations, yard tracks, structures including bridges, tunnels, embankments, and viaducts; communication systems, non-revenue equipment; spare parts and stores; special tools including test equipment, both portable and bench; office and administrative furnishings, computers, and all other items required for the management and administration of the service; access roads, including snow removal; ticket vending and other fare collection equipment including communication links; every other element of capital investment for the project. For each asset, its useful life shall be identified; those assets receiving FTA funding shall use the FTA guidelines for this information.

The Maintenance Plan shall be organized into the following two topics:

- Preventative Maintenance. For each capital investment element, the GEC shall develop a preventative maintenance program that includes the type of preventive maintenance, the frequency required for each item, and the personnel and equipment necessary to perform each preventative maintenance task. For rolling stock, track, and other items that have prescriptive inspection, maintenance, and service intervals and requirements established by the Federal Railroad Administration (FRA), the GEC shall clearly identify and describe what is to be done, at what interval of time or performance, and the personnel and equipment/special tools that are required for each task.
- Corrective Maintenance. For each capital investment element, the GEC shall develop a list of potential repairs, an estimated or projected frequency for each repair, a recommendation as to who should perform the repair (contract operator or third-party contractor), and, for each item to be performed by the contract operator, the type of equipment, special tools, test equipment and personnel that would be required to perform the repair work.

#### 12. Performance Standards

The GEC shall propose standards of performance for the contract operator that will define both audit points and contractual bonus and penalty provisions. The standards shall address the following items:

- Operating Speed
- Trip Times
- Passenger Capacity
- Hours of Operation

- Service Ramp-up
- Service Expansion
- Reliability and Availability
- Safety
- Cost effectiveness
- Productivity
- Efficiency

### 13. Safety and Security Certification Plan

For project elements that fall within the regulatory authority of the FRA, the Code of Federal Regulations contains the requirements that have to be fulfilled prior to the start of revenue service, or even placing elements of the project into the test program. For elements that may be within FTA jurisdiction, State Safety Oversight requirements have to be met.

In addition to the SSMP, the GEC shall prepare a draft Safety and Security Certification Plan that will be included with the solicitation for the contract operator. The Plan shall address the following items, identifying which authority has jurisdiction and describing the responsibilities of the contract operator:

- System-wide elements
- Fixed facilities
- Plans, procedures, and training
- Emergency preparedness
- Incident reporting
- Security

### 14. Operating Plan

There have been numerous studies performed to date that address various operating schemes, frequencies, scenarios, routes, and stations to be served by the Ann Arbor-Detroit Regional Rail service. Prior to the start of revenue service, a detailed Operating Plan must have been reviewed and approved by all affected organizations and governmental authorities. In addition, the Operating Plan will define the scope of services to be provided by the contract operator, as well as which organization(s) will be responsible for items not to be provided or performed by the contract operator.

The GEC, starting with the work previously performed including agreements with affected parties in the region, shall prepare a detailed Operating Plan. The Operating Plan shall clearly define the scope of services for the contract operator and shall be part of the solicitation for that contract.

- Management and Administration. The GEC shall provide a preliminary organization
  chart for the contract operator that includes reporting relationships to the oversight
  authority(ies). A description of the duties, tasks, and responsibilities for each contract
  operator management and administrative position shall be developed. The qualifications
  including educational level achieved, previous experience, and other skills and
  characteristics as may be necessary and appropriate for each position shall be described.
- Liability and Indemnification. Risk management professionals of MDOT will establish the liabilities and indemnifications that will apply to the operation of revenue service over and through tracks and facilities of other railroads and Amtrak. The GEC shall be prepared to assist this effort to the extent requested. Such efforts shall include, but not be limited to, describing what other United States commuter rail agencies have in place. This includes summarizing current legislative or industry organization efforts to address these issues for the commuter rail industry as a whole, and assisting with discussions and negotiations with the railroads and Amtrak.
- Operations Control Center & Dispatch. The GEC shall identify and describe the location, capabilities, and proposed staffing of the Operations Control Center (OCC) for the service. To the extent that the service may have dispatch authority, the OCC shall be equipped to handle those requirements. It is more likely, however, that dispatching will be done by others. In that case, the GEC shall describe the location, capabilities, and proposed staffing to permit the contract operator to monitor the dispatch activities of the other party(ies) and to contact such other party(ies) if contractual performance is not being provided to the Ann Arbor –Detroit Regional Rail service.
- Schedules. The GEC shall develop timetables and passenger schedules for the commuter rail services to be provided, including weekday and weekend, if implemented. Crew schedules and staffing to support the service also shall be provided.
- Craft Employees. The GEC shall identify each maintenance and operations or operations-support position that is required to deliver and maintain an effective and efficient service. The GEC furthermore shall identify which positions are to be filled by the contract operator. A description of the duties, tasks, and responsibilities for each contract operator craft position shall be developed and included. The qualifications including educational level achieved, previous experience, and other skills and characteristics as may be necessary and appropriate for each position shall be included.
- Station operations. The GEC shall develop proposed station staffing positions including support for passengers, cleaning, and maintenance (if required) for each passenger station.

- Rolling Stock Storage, Maintenance and Service. A maintenance facility location has not yet been selected. The GEC shall assist with the identification of that site and provide the parameters that should govern site selection, such as preferred location along the line of service, amount of land required, size and shape of maintenance facility, yard space, access roads, utility availability, and all other factors, excluding real estate values and environmental issues. The GEC shall identify support services required or recommended good practices such as multiple electric sources or UPS or back-up power sets. Train crew and shop personnel locker rooms, for both sexes, management and administrative areas, and all other needed space shall be identified and preliminarily sized. Length and quantity of yard storage and access tracks, configuration of those tracks (including future expansion), and all elements of track construction (drainage, lighting, fire suppression, support roads, etc.) shall be identified.
- Fare Collection. Ticket vending machines are expected to be procured, with on-board verification by train crew. The GEC shall identify locations for and numbers of the machines at each station. Municipal offices and internet purchasing options will also be developed. The GEC shall recommend which organization should have maintenance responsibility for the machines, and provide a description of the level of maintenance required including staffing and training and repair/maintenance shop space.
- *Marketing*. The GEC shall describe all marketing and system branding activities and recommend which organization should take responsibility. If the contract operator is to be responsible for marketing, the GEC shall include a detailed description of the marketing tasks in this section.
- Employee Drug and Alcohol Testing. Certain categories or classes of employees of the contract operator may be subject to FRA requirements for random drug and alcohol testing. The GEC shall clearly identify each position or classification for which such requirements will apply and describe those requirements. As provisions will be needed at every reporting-for-duty point, the GEC shall identify each such location. For contract operator employees not subject to FRA regulations, the GEC will propose what plan, if any, for equivalent testing is to be required for such employees.

### **B.** Other Passenger Rail Initiatives

Provide consulting services for other passenger rail endeavors affecting Southeast Michigan, such as WALLY, on an as needed basis.

### IV. ANTICIPATED PROJECT SCHEDULE

Target Date	Required Activity
March 27, 2009	Proposals Due
April 3, 2009	Consultant Selected
April 10, 2009	Contract Negotiated
May 19, 2009	Contract Executed

June 26, 2009	Project Management Plan Completed
June 26, 2009	Project Quality Management Plan Completed
July 31, 2009	Risk Management Plan Completed
July 31, 2009	Contract Management Plan Completed
September 25, 2009	Operator Quality Management Plan Completed
September 25, 2009	Financial Plan Completed
November 20, 2009	Safety & Security Management Plan Completed
December 31, 2009	Testing & Commissioning Plan Completed
December 31, 2009	Maintenance Plan Completed
December 31, 2009	Performance Standards Completed
December 31, 2009	Safety & Security Certification Plan Completed
June 25, 2010	Operating Plan Completed
December 17, 2010	Contract Expiration

### V. CONTRACT PRICE, PAYMENT SCHEDULE & CONTRACT EXTENSION

### A. Contract Price

This contract will be a Tier III contract (over \$250,000). Compensation for the Scope of Services shall be on a cost plus fixed fee basis. Use the following format in presenting cost information:

- Personnel costs. Indicate the classification (project manager, section analyst, etc.), the
  deliverable, estimated hours for each deliverable by classification, hourly rate, and total
  cost
- Cost of supplies and materials
- Other direct costs
- General & administrative burden or overhead (indicate percentage and total)
- Transportation costs
- Total price bid for the project

Direct expenses will not be paid in excess of that allowed by the Department for its own employees in accordance with the State of Michigan's Standardized Travel Regulations. Supporting documentation must be submitted, with the invoice/bill, for all billable expenses on the Project. The only hours that will be considered allowable charges for this contract are those directly attributable to the activities of this Project.

### **B.** Payment Schedule

Payment for any contract entered into as a result of this RFP will be made monthly upon receipt of the consultant's billing statement and progress report.

### C. Contract Extension

MDOT reserves the right to extend the time of the contract up to 12 months if conditions warrant, to be mutually negotiated at a reasonable time (at least 60 days) prior to contract expiration. Any extension is to be agreeable to both MDOT and consultant and will be by amendment to the contract.

### VI. PROGRESS REPORTS AND MEETINGS

Progress reports and meeting notes shall be submitted on or before the dates outlined in Section IV. Progress reports, meeting notes, and deliverables shall be submitted to the project manager in an electronic format. Progress reports should be submitted to:

Robert Kuehne, Passenger Policy Specialist Intermodal Policy Division
Bureau of Transportation Planning
Michigan Department of Transportation
425 W. Ottawa Street
P.O. Box 30050
Lansing, MI 48909
kuehner@michigan.gov
(517) 335-2926

### VII. SUBCONTRACTING OF CONTRACT WORK

A minimum of 60% of all contracted work must be conducted by the prime consultant. All subcontracts must be approved by the MDOT project manager and project team.

#### VIII. PRIME CONSULTANT RESPONSIBILITIES

- A. Meet with the MDOT project manager and project team prior to beginning any major work element to review the relationship of work to the project objectives, clarify the nature of the work element, and review sources of relevant data. The consultant will give attention to critical target dates and required lead times.
- B. The MDOT project manager shall be the official MDOT contact person for the consultant. The consultant must furnish a copy of all correspondence to the MDOT Project Manager.

- This includes all sub-consultant correspondence and verbal contact records. The MDOT project manager shall be aware of all communications regarding the project.
- C. The consultant shall notify MDOT and obtain MDOT approval of all proposed subconsultants and contracts for all work that will not be performed directly by the consultant.
- D. As work progresses, the consultant will present all deliverables in draft form as specified in the Deliverables Section for review by the MDOT project manager, project team, and other appropriate MDOT and SEMCOG staff.

#### IX. PROPOSAL SELECTION CRITERIA

### A. Understanding of Service and Innovations: 40 Points

Describe the understanding of the service to be provided, innovations, or other issues. This information is to be based on the scope of services. Include any work item that should be added to the scope of services, or any work item in the current scope of services which should be altered.

### B. Qualifications of Team: 35 Points

The scoring for qualifications of the team will be one score based on the following information:

- Structure of the Project Team (Personnel and Roles). Describe the structure of the project team including the roles of all key personnel and sub-consultants. For each sub-consultant, describe role in service and include what percent of the named role the sub-consultant is expected to provide.
- Staff Service Experience. Provide resumes for each of the key staff of the prime and subconsultant. The resume is limited to three (3) pages (single side) per key staff member.
- *Staff Abilities*. Ability to conduct the research, produce the deliverables, develop the message and marketing materials, and work with media agencies and placement organizations.

### C. Past Performance: 20 Points

MDOT will review relevant performance evaluations for the past five (5) years for prime and sub-consultants/vendors that are being proposed. If the consultant/vendor has not previously worked for MDOT or has only had a few service opportunities that have been evaluated, this area can be used to provide other references for the selection team to contact. These references would be in addition to references provided in the resumes provided in "Qualifications of Team," and limited to work completed in the past five (5) years.

## D. Location & Availability: 5 Points

This factor will be based on the contractor's accessibility and ability to devote a concerted effort to the project. The consultant selection criteria regarding location will include consideration of the following: (1) whether the consultant has a Michigan office although not required, (2) proximity of the consultant's base of operations to Michigan (Chicago is reasonable, but Los Angeles may not be). The consultant selection criteria regarding availability will include the following: (1) the number of proposed visits to Lansing and Southeast Michigan, (2) number of person hours by classification.

### E. Price: 34 Points

The Total Bid amount submitted on the Bid Sheet included with the proposal will be scored using a predetermined scale set by the MDOT Selection Team.

(The total number of points is 134)

# **BID SHEET**

# ANN ARBOR – DETROIT REGIONAL RAIL PROJECT

# **PAY ITEMS**

All entries on this page must be handwritten in ink or computer generated.

CLASSIFICATION	ESTIMATED HOURS	HOURLY RATE	LABOR COSTS
	te the classification (pronours for each deliverable		
	TOTAL I	ESTIMATED LABOR:	
OVERHEAD (general (Total Estimated Labor	& administrative burder x 000.00%)	n): OTAL OVERHEAD: _	
ESTIMATED DIRECT	Γ EXPENSES (listed by	item at estimated actua	l cost):
Cost of Supplies & Ma	terials		
Other Direct Costs			
Transportation Cost			
,	ГОТАL ESTIMATED I	DIRECT EXPENSES:_	

FIXED FEE:		
(Total Estimated Labor +	Overhead) x 00% TOTAL FIXED FEE:	
	Total Bid:	
Consultant Name:		
Consultant Address:		
Date:		
Authorized Signature		

The Michigan Department of Transportation reserves the right to reject any or all bids.

Exhibit 1						Lege	Legend:							3,	3/6/2009
Ann Arbor - Detroit Regional Rail Project						Dura	Duration		2	Š	XXXXXXXX				
						Active	ve								
						Criti	Critical Path	ţ							
WORK SCHEDULE for Preconstruction Activities						Mile	Milestone			<b>&gt;</b>					
Task Description	Start	Drugues of the contract of the	Feb-09 Mar-09	Apr-09 May-09	60-nut	60-guA	60-dəS	90-voV	01-nsl	Peb-10	Mar-10 Apr-10	Of-ysM	01-nul	01-guA	0r-10 0r-10
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1 Right of Way Acquisition															
1.1 Rail Right of Way	01-Jun-09	30-Aug-09			X	X									
1.2 Maintenance/Administration Facility	01-Jun-09	30-Aug-09			XX	X									
1.3 Detroit Layover Facility	01-Jun-09	30-Aug-09			×	×									
1.4 Ann Arbor Layover Facility	01-Jun-09	30-Aug-09			×	×									
1.5 Ann Arbor Station	01-Jun-09	30-Aug-09			×	×									
1.6 Ypsilanti Station	01-Jun-09	30-Aug-09			XX	×									
1.7 Airport Station	01-Jun-09	30-Aug-09			×	×									
1.8 Dearborn Station	01-Jun-09	30-Aug-09			×	×									
							+						-		
2 Facility and Station Design															
2.1 Maintenance/Administration Facility	01-Sep-09	30-Dec-09					×	×							
2.2 Detroit Layover Facility	01-Sep-09	30-Dec-09					××	×							
2.3 Ann Arbor Layover Facility	01-Sep-09	30-Dec-09					XXX	×	(						
2.4 Ann Arbor Station	01-Sep-09	30-Dec-09					×	×	_						
2.5 Ypsilanti Station	01-Sep-09	30-Dec-09					×	×	<b>\</b>						
2.6 Airport Station	01-Sep-09	30-Sep-11					×	×	×	×	×	×	×	×	×
2.7 Dearborn Station	01-Sep-09	30-Dec-09					×	×	)						
													_		
S Agency Coordination/Memorandum of Understanding		-	-	-	_	:	-	:	_	-	_	-	_	_	_
3.1 Federal Railroad Administration	01-Jan-09	30-Oct-10 X	$\overline{}$	_	×	×	×	×	_	_	×	_	×	×	×
3.2 Federal Transit Administration	01-Jan-09	30-Oct-10 X		_	×	×	×	×	×	$\hat{\mathbf{x}}$	×	×	×	×	×
3.3 Federal Highway Administration	01-Feb-09	30-Dec-09	X	XX	×	×	XX	×	<u> </u>						
3.4 Detroit Dept of Transportation	01-Jan-09	30-Oct-10 X	X	×	×	×	X	×	X	$\hat{\mathbf{x}}$	×	×	×	×	×
3.5 Ann Arbor Transportation Authority	01-Jan-09			_	×	×	$\overline{}$	×		_	_	_	-	_	×
3.6 SMART	01-Jan-09	30-Oct-10 X	×	×	$\overline{}$	×	×	×	_	$\hat{\mathbf{x}}$	×	×	×	×	×
3.7 Local Agencies with Permitting Requirements	01-May-09	30-Jan-10		×	×	×	×	×	×						
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Exhibit 1						۲	Legend:	<u></u>			L				ĕ	3/6/2009
Ann Arbor - Detroit Regional Rail Project						۵	Duration	_		ŝ	XXXXXXXX	×				
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WORK SCHEDULE for Preconstruction Activities						Ξ	Milestone	ne								
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				/	•		8	_	_		_	_				_
4 Civil, Structural, Track, & Signal Design																
4.1 West Detroit Connection	01-Feb-09	30-Jul-09	×	×	×	×										
4.2 CSAO Upgrade Beaubien Interlocking	01-Sep-09	30-Dec-09					×	×	×							
4.3 CSAO Upgrade Main Tracks 1 & 2	01-Sep-09	30-Dec-09					×	×	×							
4.4 CSAO Direct Connection to CSX at CP Lou	01-Sep-09	30-Dec-09					×	×	×							
4.5 CSAO Upgrade CP Townline	01-Sep-09	30-Dec-09					×	×	×							
4.6 NS Second Main Track CP Mort to Telegraph Rd	01-Sep-09	30-Dec-09					×	×	×							
4.7 NS 45 mph Crossover West of COG	01-Sep-09	30-Dec-09					×	×	×							
4.8 NS Siding at Geddes	01-Sep-09	30-Dec-09					×	×	×							
4.9 Ann Arbor Layover Track	01-Sep-09	30-Dec-09					×	XX	×							
5 Equipment and Material Procurement												1	<b></b>			
5.1 Rolling Stock	01-Jun-09	30-Dec-09			×	×	×	×	×							
5.2 Ticket Vending Machines	01-Oct-09	30-Dec-09						×	×							
5.3 Communication equipment	01-Oct-09	30-Dec-09						×	×							
5.4 Support Vehicles	01-Oct-09	30-Dec-09						×	×							
5.5 Platform Wheel Chair Lifts																
6 Utility Coordination								-								
6.1 Fiber Optics	01-Jun-09	30-Jul-10			×	×	×	×	×	×	×	×	×	×		
6.2 Water	01-Jun-09	30-Jul-10			×	×	×	×	×	×	×	×	×	×		
6.3 Sanitary Sewer	01-Jun-09	30-Jul-10			×	××	X	XX	X	×	X	X	XX	_		
6.4 Storm Drainage	01-Jun-09	30-Jul-10			×	×	×	×	×	×	×	×	×	×		
7 Railroad Agreements																
7.1 Norfolk Southern Railway	01-Feb-09	30-Jun-09	×	×	×											
7.2 Canadian National Railway	01-Feb-09	30-Jun-09	×	×												
7.3 Conrail	01-Feb-09	30-Jun-09	×	×	×	_		$\dashv$		-						

Exh	Exhibit 1								Leg	Legend:	_								_	3/6/2009	600
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									Criti	ical	Critical Path										
<u>×</u>	<b>WORK SCHEDULE for Preconstruction Activities</b>								Mile	Milestone	e e			<b></b>							
Task	Task Description	Start	End 60-nst	Feb-09	90-78M	90-1qA	May-09 Jun-09	60-InC	60-guA	60-dəS	0-1-00 0-voN	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10 Jun-10	01-luC	01-guA	Sep-10	0r-10
7.4	7.4 Amtrak	01-Feb-09	30-Jun-09	×	×	$\frac{2}{x}$	× × × ×														
7.5	7.5 Ann Arbor Railroad	01-Feb-09	30-Jun-09	×	×	×	××××														
7.6	7.6 Great Lakes Central Railroad	01-Feb-09	30-Jun-09	×	×	×	× × × ×														
ω	8 Environmental Compliance																				
8.1	8.1 Federal Railroad Administration	01-Jun-09	30-Dec-09				×	×	×	×	XXXXXX	X									
8.2	8.2 MDOT Environmental Division	01-Jun-09	30-Dec-09				×	×	×	×	× × × ×	×									
8.5	8.3 Municipal compliance for Facilities	01-Jun-09	30-Dec-09				×	×	×	×	XXXXX	×									
(0)	9 Business Plan																				
9.	9.1 Capital Costs Estimates	01-Jun-09	30-Nov-09				×	×	×	×	XXXXX										
9.2	9.2 Annual Operating Costs	01-Jun-09	30-Nov-09				×	×	×	×	× × × × ×										
9.5	9.3 Funding Sources	01-Jun-09	30-Nov-09				×	×	×	×	× × × ×										
7	10 Branding																				

Exhibit 2					Le	Legend:						3/6	3/6/2009
Ann Arbor - Detroit Regional Rail Project						Duration XXXXX	XXXX	×					
<b>WORK SCHEDULE for Construction Activities</b>					Ē	Milestone	<b></b>						
Tack Description	trety.	60-us	ep-09	Apr-09 Apr-09 May-09	60-ln	60-də	60-vol	ot-də:	10r-10 Apr-10	Nay-10	0۲-nul	01-gu/	01-q96
			N H	N		S	_		_	N	_		
1 Stations (platforms, depots, access, & parking)													
1.1 Ann Arbor	01-Mar-10	30-Sep-10							×	×	×	×	J
1.2 Ypsilanti	01-Mar-10	30-Sep-10							×	×	×	×	
1.3 Airport Station (platform & parking)	01-Mar-10	30-Sep-10							×	×	×	×	
1.4 Dearborn	01-Mar-10	30-Sep-10							×	×	×	×	
1.5 Detroit	01-Mar-10	30-Sep-10							×	×	×	×	
2 Facilities Construction													
2.1 Detroit Layover Facility	01-Mar-10	30-Sep-10							×	×	×	×	×
2.2 Ann Arbor Layover Facility	01-Mar-10	30-Sep-10							×	×	×	×	
2.3 Maintenance Facility	01-Mar-10	30-Jul-10							×	×	×		
2.4 Administration Facility	01-Mar-10	30-Sep-10							×	×	×	×	×
3 Track & Signal Construction (Force Account)							_	_			_		
3.1 West Detroit Connection	15-Oct-09	30-Jul-10				×	X	XX	×	X	X		
3.2 CSAO Upgrade Beaubien Interlocking	01-Mar-10	30-Jul-10							×	X	X		
3.3 CSAO Upgrade Main Tracks 1 & 2	01-Mar-10	30-Jul-10							XX	×	XX		
3.4 CSAO Direct Connection to CSX at CP Lou	01-Mar-10	30-Jul-10							×	×	×		
3.5 CSAO Upgrade CP Townline	01-Mar-10	30-Jul-10							×	×	×		
3.6 NS Second Main Track CP Mort to Telegraph Rd	01-Mar-10	30-Jul-10							×	×	×		
3.7 NS 45 mph Crossover West of COG	01-Mar-10	30-Jul-10							×	×	×		
3.8 NS Siding at Geddes	01-Mar-10	30-Jul-10							×	×	×		
3.9 Ann Arbor Layover Track	01-Mar-10	30-Jul-10							×	×	×		
3.1 New Center Station Layover Track	01-Mar-10	30-Jul-10							×	×	×		
4 Civil & Structural Construction (MDOT Contract)											$\rightarrow$		
4.1 West Detroit Connection	01-Mar-10	30-Jul-10							×	×	$\overline{}$		
4.2 CSAO Upgrade Beaubien Interlocking	01-Mar-10	30-Jul-10							×	×			
4.3 CSAO Upgrade Main Tracks 1 & 2	01-Mar-10	30-Jul-10							×	×	×		

Ann Arbor - Detroit Regional Rail Project         Duration xxxxxx           WORK SCHEDULE for Construction Activities         Start         End         9 6 9 6 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Exh	Exhibit 2						Le	Legend:	<del>;;</del>									3%	3/6/2009	
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Start End Go G G G G G G G G G G G G G G G G G G	<b>X</b>	ORK SCHEDULE for Construction Activities						Ξ	lesto	one	<b></b>										
t CP Lou 01-Mar-10 30-Jul-10 01-Jul-10 30-Sep-10 01-Jul-10 01-Jul-	Task	Description	Start	End	Feb-09	90-ysM								Mar-10	01-1qA	May-10	0Լ-սոՐ	01-1սե	01-guA	OL-qa2	0r-toO
t CP Lou 01-Mar-10 30-Jul-10 01-Jul-10 30-Sep-10 01-Jul-10 01-Jul-10 30-Sep-10 01-Jul-10 01-Jul-																					
O1-Mar-10 30-Jul-10 G G O1-Mar-10 30-Jul-10 G O1-Mar-10 30-Jul-10 O1-Mar-10 30-Jul-10 O1-Mar-10 30-Jul-10 O1-Mar-10 30-Jul-10 IDOT IDOT IS IS IDOT O1-Jul-10 30-Sep-10 IS IS IS IDOT O1-Jul-10 30-Sep-10 IS	4.4	CSAO Direct Connection to CSX at CP Lou	01-Mar-10	30-Jul-10										X	X	XXX		×			
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101-Mar-10 30-Jul-10 01-Mar-10 30-Jul-10 01-Mar-10 30-Jul-10 01-Mar-10 30-Jul-10 <b>x</b> 01-Jul-10 30-Sep-10 <b>x</b> 18 01-Jul-10 30-Sep-10 18 01-Jul-10 30-Sep-10 01-Jul-10 01-Jul-10 30-Sep-10 01-Jul-10 0	4.	NS 45 mph Crossover West of COG	01-Mar-10	30-Jul-10										×	XXXX	×	×	×			
101-Mar-10 30-Jul-10 01-Mar-10 30-Jul-10 01-Mar-10 30-Jul-10 01-Jul-10 30-Sep-10	4.8	NS Siding at Geddes	01-Mar-10	30-Jul-10										×	××××	×	×	×			
101-Mar-10 30-Jul-10   X	4.5	Ann Arbor Layover Track	01-Mar-10	30-Jul-10										×	×	×××	×	×			
01-Jun-09 30-Jun-10 <b>X</b> 01-Jul-10 30-Sep-10 01-Jul-10 30-Sep-10 01-Jul-10 30-Sep-10 01-Jul-10 30-Sep-10 01-Jul-10 30-Sep-10	4.10	New Center Station Layover Track	01-Mar-10	30-Jul-10										×	×	×	×	×			
01-Jun-09 30-Jun-10 <b>x</b> 01-Jul-10 30-Sep-10 01-Jul-10 30-Sep-10 01-Jul-10 30-Sep-10 01-Jul-10 30-Sep-10																					
01-Jun-09 30-Jun-10 <b>X</b> 01-Jul-10 30-Sep-10  01-Jul-10 30-Sep-10  01-Jul-10 30-Sep-10  01-Jul-10 30-Sep-10	~,	Equipment Procurement																			
01-Jul-10 01-Jul-10 01-Jul-10 01-Jul-10	2.	Rolling Stock Refurbishment	01-Jun-09	30-Jun-10				×	×	×	$\hat{\mathbf{x}}$	×	X	×	X	×	×				
01-Jul-10 01-Jul-10 01-Jul-10 01-Jul-10																				_	
01-Jul-10 01-Jul-10 01-Jul-10 01-Jul-10		Delivery & Testing of Train Sets																	-		
01-Jul-10 01-Jul-10 01-Jul-10	,.	Acceptance testing witnessed by MDOT	01-Jul-10	30-Sep-10														×		×	
01-Jul-10 01-Jul-10	6.5	Operational testing by System Operator	01-Jul-10	30-Sep-10														X		×	
01-Jul-10 01-Jul-10		Delivery & Testing of Subsystems																			
01-Jul-10	7.	Acceptance testing witnessed by MDOT	01-Jul-10	30-Sep-10														XX		×	
	7.2	Operational testing by System Operator	01-Jul-10	30-Sep-10														×	×	×	
																					$\Box$